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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,442	10/29/2003	Kenji Ueyama	50024-021	4582

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WASHINGTON, DC 20005-3096

EXAMINER

KAHELIN, MICHAEL WILLIAM

ART UNIT	PAPER NUMBER
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3762

MAIL DATE	DELIVERY MODE
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01/09/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/695,442

Applicant(s)

UEYAMA, KENJI

Examiner

Michael Kahelin

Art Unit

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 8-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/24/2007 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun et al. (US 5,861,019, hereinafter "Sun").

4. In regards to claim 1, Sun discloses a portable ECG system comprising a stacked circuit board (Fig. 15), an EGM measurement device, and a radio communication device that transmits an EGM in real time (col. 8, line 66). Further, the stacked-layered circuit board comprises a plurality of circuit boards (30 and the internal

circuitry disclosed at col. 8, line 30 and by reference of US 5,470,345), a ground layer between the plurality of circuit boards (48 and col. 10, line 37), wherein the EGM measurement device is on one side of the board (internal to the device) and the radio communication device (30 and the circuitry that provides transmission generally described in column 9) is arranged on the other side. Please note that Sun's device meets the limitations of "stacked-layered circuit board" because it comprises a circuit and is stacked. Further, the EGM measurement device and radio communication device are (electrically) isolated from each other due to feed-through (54). Additionally, the claim language only requires that a portion of the radio communications device be on the opposite side of the EGM device (not the entire radio communications device). Because Sun's radio communications device (transmission circuit/antenna) lies on both sides of the ground plane, this structure meets the claim language.

5. In regards to claim 2, the device comprises a casing that houses the EGM, radio communication device, and stacked layer circuit board (col. 10, line 48).
6. In regards to claim 3, the device comprises a first storage device that stores ECG data (col. 8, line 42).
7. In regards to claim 20, the device is of a size that is capable of being held in the hands (Fig. 1).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun.

Sun discloses the essential features of the claimed invention including an activity sensor (col. 8, line 34) and a programmer for uplink telemetry with the ECG device (col. 8, line 15). Sun does not disclose that the activity sensor is an accelerometer, the external programmer has a second storage device, or that the portable ECG outputs an alarm sound or display in response to an alarm signal. It is well known in the art to provide ECG devices with accelerometer activity sensors to provide a simple, low-cost means to correlate physical activity with heart activity; storing uploaded data in a memory in programmers to allow the data to be later analyzed or displayed; and outputting an alarm sound or display in response to an alarm signal to notify a patient of a possible adverse condition. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Sun's invention with an accelerometer activity sensor to provide the predictable results of a simple, low-cost means to correlate physical activity with heart activity; means for storing uploaded data in a memory in programmers to provide the predictable results of allowing the data to be later analyzed or displayed; and means for outputting an alarm sound or display in response to an alarm signal to provide the predictable results of notifying a patient of a possible adverse condition.

10. Additionally, claims 1-7 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besson et al. (US 6,289,238, hereinafter "Besson") in view of Shankar et al. (US 7,225,029, hereinafter "Shanker").

11. In regards to claim 1, Besson discloses the essential features of the claimed invention including a stacked-layered circuit board (Fig. 2b and col. 23, lines 4-33), an EGM measurement device (col. 23, lines 4-33), a telemetry device (34 and 36a), and a ground plane (36b and col. 22, lines 47-62) between the antenna and electrode (col. 22, line 55) that isolates the two. Besson does not disclose a ground conductor layer with an EGM measurement device on one side and a radio communications device comprising a transmission circuit on the other side that transmits EGM data in real-time. Shankar teaches of a device having a ground conductor layer (600 between 804 and 806) with an EGM measurement device on one side (806) and a radio communications device comprising a transmission circuit on the other side (804) to provide the predictable result of avoiding interference between the high-frequency communications circuitry and the sensitive electrogram circuitry. Further, it is well known in the electrophysiology arts to acquire and transmit signals in real-time to provide current diagnostic data that is reflective of the patient's current condition. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Besson's invention by providing a ground conductor layer with an EGM measurement device on one side and a radio communications device comprising a transmission circuit on the other side to provide the predictable result of avoiding interference between the high-frequency communications circuitry and the sensitive

electrogram circuitry and to acquire and transmit signals in real-time to provide the predictable result of providing current diagnostic data that is reflective of the patient's current condition.

12. In regards to claim 2, Besson discloses a casing that houses the devices (71).

13. In regards to claim 3, Besson discloses an externally-readable first storage device (col. 8, lines 28-43).

14. In regards to claim 4, the device further comprises an accelerometer (col. 11, lines 59-65).

15. In regards to claim 5, the device further includes a second memory for the sensor signal (col. 14, lines 36-40).

16. In regards to claim 20, the device is of a size that is capable of being held in the hands (Fig. 3).

17. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Besson in view of Shankar. Besson and Shankar disclose the essential features of the claimed invention except for a device that outputs an alarm sound or display in response to an alarm signal. It is well known in the art to output an alarm sound or display in response to an alarm signal to notify a patient of a possible adverse condition. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Besson and Shankar's invention with a means for outputting an alarm sound or display in response to an alarm signal to provide the predictable results of notifying a patient of a possible adverse condition.

18. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun (or Besson and Shankar) in view of Quy (US 6,602,191, hereinafter "Quy"). Sun (or Besson and Shankar) disclose the essential features of the claimed invention except for a radio communications device that is a cellular phone. Quy teaches of monitoring health parameters, such as ECG, with a cellular phone to provide remote review by a physician or health specialist. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Sun's (or Besson and Shankar's) device by monitoring health parameters, such as ECG, with a cellular phone to provide the predictable result of providing remote review by a physician or health specialist.

Response to Arguments

19. Applicant's arguments with respect to claims 1-7, 20 and 21 have been considered but are moot in view of the new ground(s) of rejection, necessitated by amendment. Please see the explanation above for the rejections in view of Sun.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kahelin whose telephone number is (571) 272-8688. The examiner can normally be reached on M-F, 8-4.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on (571) 272-4955. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MWK

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1/4/08

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GEORGE R. EVANISKO
PRIMARY EXAMINER

1/4/08